



Communicable Disease and Epidemiology News

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Influenza Update

As of the week ending December 8th, only one case of culture-confirmed influenza A, H1N1 has been reported in King County via Public Health's Sentinel Influenza Physicians Laboratory Surveillance Network. Of the 172 influenza isolates characterized nationally since September 30, 2001, 163 (95%) were influenza A viruses and 9 (5%) were influenza B viruses. Eighty-eight (51%) of the 172 influenza viruses isolated were identified in Alaska, the only state yet to report widespread influenza activity this season.

It is not too late to vaccinate your high-risk patients for influenza. In 15 of the last 19 influenza seasons, influenza has not peaked until January. **Even when influenza is occurring in a community, high-risk persons who are previously unvaccinated can benefit from influenza vaccination.** In addition, young, healthy persons who previously delayed their influenza vaccination because of vaccine shortages can now be vaccinated, as there are currently plentiful supplies of vaccine available.

Up-to-date information on King County influenza virus activity can be found at:
<http://www.metrokc.gov/health/immunization/fluseason.htm>

Pertussis in Infants

Case #1

A one-month-old was seen by his pediatrician for a cough of one-day duration and was diagnosed with a viral upper respiratory infection. During the next 8 days, the infant developed a paroxysmal cough and post-tussive vomiting and returned to the pediatrician's office. A nasopharyngeal (NP) swab was done and the infant was treated with clarithromycin for 14 days. The direct fluorescent antibody (DFA) test for pertussis was negative, and the culture was positive after 10 days. Public Health conducted contact tracing and prophylactic antibiotics were prescribed for the parents and siblings of the case.

Case #2

A two-month-old child presented to an emergency department (ED) with a one-week history of paroxysmal cough, worse at night and associated with cyanosis. The infant was hospitalized and treated with erythromycin, both DFA and culture were positive for *B. pertussis*. One week prior to this infant's illness his three year-old sibling was diagnosed with "bronchitis" and treated with azithromycin.

Pertussis is a highly contagious, toxin-mediated bacterial infection characterized by a prolonged cough that may last weeks to months. Persons with pertussis may have little or no fever and initial symptoms can resemble an uncomplicated "cold". In many patients, the cough illness progresses and is characterized by spasmodic, repetitive coughing episodes, often worse at night, and sometimes accompanied by gagging or vomiting. Apnea, cyanosis, and a high-pitched inspiratory whoop may accompany the cough, but are often absent. Between coughing episodes the individual may not feel ill. Infants less than six months of age are at greatest risk for complications, including anorexia, dehydration, pneumonia, and hypoxia leading to seizures, encephalopathy, and death.

Immunity induced by childhood DTP or DtaP vaccination wanes over time, and is thought to provide little protection against pertussis 10-12 years after the last dose. Previously immunized adolescents and adults, and incompletely immunized children may have less severe clinical presentations due to partial immunity, yet can still transmit infection to susceptible younger children and infants at higher risk for complicated illness.

Although the number of pertussis cases reported in King County through December 2001 is only 39 (versus a high of 458 in 1999), the proportion of pertussis diagnoses that were made in infants has increased from 7.6% (35/458) in 1999 to 28.2% (11/39) in 2001. This suggests that there is a reservoir of undiagnosed pertussis cases in the community causing infection among susceptible infants. Clinicians should have a high index of suspicion for pertussis in persons presenting with cough illness, particularly if greater than 2 weeks duration. It is not uncommon for a patient to be seen two or three times by their health care provider for a "cough" illness before pertussis is considered, and pertussis is commonly misdiagnosed as "bronchitis", viral respiratory tract infection, and asthma or allergy-induced cough.

Because up to 80% of household contacts of a pertussis case become infected, household members of confirmed or highly suspect pertussis cases should be treated with preventive antibiotics. Erythromycin is the "official" antibiotic of choice, but compliance may be poor due to side effects and frequency of administration. Clarithromycin or azithromycin are likely to be effective, and trimethoprim-sulfamethoxazole is an acceptable (yet unproven) alternative to macrolide therapy. Until the first five days of antibiotic therapy have been completed, persons with pertussis should be considered contagious and should be excluded from settings where they could

expose others, such as child day care settings, schools and work sites.

B. pertussis can be isolated from nasopharyngeal secretions when transported in Regan-Lowe transport media. PCR testing can be done at the WA State Public Health Laboratory using a NP swab specimen placed into a dry sterile container for transport. Direct fluorescent antibody (DFA) testing is also available, but is neither as sensitive or specific as culture and negative results of DFA testing should never be relied upon to rule-out pertussis infection.

Recommendations for treatment of household members and other contacts of pertussis cases, as well as school and daycare outbreak control measures are based on confirmation of diagnosis by culture. Appropriate diagnostic testing of suspected pertussis cases using culture (with or without DFA testing) is important not only for individual case management, but also for allowing optimal disease control interventions to interrupt the spread of infection among contacts.

Pertussis test kits, including Regan-Lowe transport tubes, Dacron swabs, dry sterile transport tubes, and instructions for collection of specimens can be obtained from the Public Health Laboratory by calling (206) 731-8950. Please see the following website for more information about the diagnosis and treatment of pertussis:
<http://www.metrokc.gov/health/prevcont/pertussis/hm#links>

Smallpox Hoax in King County

On December 7, 2001, U.S. Customs officials at the Port Authority of New York and New Jersey received an anonymous telephone call stating that a specific passenger on a flight en route from Taiwan to Seattle was either infected with or carrying smallpox virus. Customs officials informed the CDC’s Division of Quarantine, who notified Public Health. Other interested parties included the federal offices of the Health and Human Services, CDC, and Homeland Security. The aircraft was met at the gate by the SeaTac Airport HAZMAT Team. HAZMAT consulted with Public Health regarding the evaluation and management of the implicated passenger and others on the plane. The passenger was escorted from the plane and evaluated by HAZMAT paramedics and a senior infectious disease physician from Public Health. The passenger was

found to be in apparently good health without clinical findings suggestive of smallpox. U.S. Customs and FBI agents also questioned the passenger, searched his person and possessions, and found no reason for concern. All passengers submitted contact information in the event that follow-up would be needed (follow-up with the “suspect case” 13 days later still found him in good health).

This hoax raised critical issues regarding our current capacity to manage potential and confirmed smallpox cases and exposures in King County. Public Health is currently engaged with the leadership of King County hospitals (through a working group of hospital medical directors) in developing a county-wide approach to communicable disease outbreak management, with an emphasis on smallpox preparedness.

The current CDC Smallpox Response Plan and Guidelines call for a robust surveillance and epidemiological investigation capacity (including extensive case and contact tracing activities), plans for mass vaccination of contacts, health care workers, and others who may come in contact with infected individuals, follow-up of vaccinated individuals, and procedures for quarantine and isolation of exposed and symptomatic persons, respectively. The CDC smallpox guidelines are available at:
<http://www.bt.cdc.gov/DocumentsApp/Smallpox/RPG/index.asp>

Attention Family Physicians: Be on the lookout for the excellent AMA and CDC produced resource “Diagnosis and Management of Foodborne Illnesses: A Primer for Physicians” that you will be receiving soon from Public Health.

Disease Reporting

AIDS(206) 296-4645
Communicable Disease(206) 296-4774
STDs(206) 731-3954
Tuberculosis(206) 731-4579
24-hr Report Line(206) 296-4782

Hotlines:

CD Hotline(206) 296-4949
HIV/STD Hotline(206) 205-STDS

Public Health Website
www.metrokc.gov/health

Reported Cases of Selected Diseases, Seattle & King County 2001				
NR=Not Reportable in 2000				
	Cases Reported in November		Cases Reported through November	
	2001	2000	2001	2000
AIDS	18	21	234	253
Campylobacteriosis	34	25	298	303
Cryptosporidiosis	4	NR	26	NR
Chlamydial infections	341	343	3948	4087
Enterohemorrhagic <i>E. coli</i> (non-O157)	0	NR	4	NR
<i>E. coli</i> O157: H7	2	1	31	55
Giardiasis	7	23	139	217
Gonorrhea	107	128	1444	1056
<i>Haemophilus influenzae</i> (cases <6 years of age)	0	0	0	0
Hepatitis A	2	7	22	94
Hepatitis B (acute)	3	3	30	40
Hepatitis B (chronic)	48	NR	584	NR
Hepatitis C (acute)	0	0	9	10
Hepatitis C (chronic, confirmed/probable)	121	NR	1301	NR
Hepatitis C (chronic, possible)	56	NR	526	NR
Herpes, genital	37	41	637	678
Measles	0	0	12	2
Meningococcal Disease	1	4	10	16
Mumps	0	0	1	9
Pertussis	6	12	40	199
Rubella	0	0	0	1
Rubella, congenital	0	0	0	1
Salmonellosis	23	10	247	192
Shigellosis	11	8	108	147
Syphilis	9	5	56	67
Syphilis, congenital	0	0	0	1
Syphilis, late	7	9	43	32
Tuberculosis	14	11	118	114